Concept Paper

Harvard Center for Public Health Preparedness

Connectivity and Public Health Preparedness: Resolving Conflicts and Building Collaboration to Enhance System Readiness

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January 1, 2003

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The objective. Public health and related systems in this country face an unprecedented challenge in aligning themselves to effectively protect the population against bioterrorism and other weapons of mass destruction. Three core problems confront leadership: compiling accurate assessments of threats that may impact the health of the civilian population; developing appropriate domestic policies - responsive to those threats - to protect the population; and then, constructing an organizational framework to reliably implement these often unprecedented policies. While the first of these problems is primary responsibility of intelligence and law enforcement agencies, the latter two fall to health system leadership. The aim is to create a focused plan and strategy when the threat is vague and the containment strategies – such as smallpox vaccinations - bear their own public health risks. The process is further complicated by the fact that - unlike military command structures – there are imprecise and overlapping lines of authority and control among public health jurisdictions in the United States. Getting everyone on track – the same track - and effectively moving together is the task of preparedness and the goal of readiness.

Connectivity. This paper briefly introduces a conceptual framework, point of reference, and methods and techniques that can be useful in developing the needed alignment. This process - conceived in response to the complex problems and conflicts inherent to preparedness and disaster management - is termed "connectivity." It is in part inspired by testimony of Thomas Inglesby, M.D. given before the U.S. Senate Committee on Governmental Affairs on April 18, 2002. During that session, titled "the state of public health preparedness for terrorism involving weapons of mass destruction," Dr. Inglesby remarked, "Connections between public health agencies and medicine need to be strengthened – an issue that could also be called 'improved connectivity'."

Israel. This notion of connectivity is further informed by investigation of health system preparedness efforts in Israel. That on-sight research, conducted September 29 – October 6, 2002, found a well-coordinated and relatively smoothly functioning network of organizations, people, resources, and information ready to respond instantly to a terrorist incident, whether a limited suicide bombing or larger weapon of mass destruction. This system is shaped by a military, command mindset and extensive experience in responding to civilian terrorism, ranging

from limited incidents to the 39 scud missiles that hit the country during the 1991 Persian Gulf War. Central to the operation of this system is the Home Front Command, a unit of the Israel Defense Forces responsible for planning and coordination of civilian emergency responses. In addition, the Israelis have established a "Supreme Health Authority," comprised of the director general of the Ministry of Health, Surgeon General of the Israeli army, and head of the largest health service organization. This three person committee is legally empowered to decide and direct health system preparedness and policies during an emergency. By virtue of both experience and necessity, the Israelis have brought to preparedness a decision-making discipline and structure– a "connectivity" – that is not found in the United States.

Dis-connectivity. What is the resistance to fostering connectivity in this country? The U.S. health system is a complex mélange of public and private organizations. Governmental responsibilities are spread among numerous federal bureaucracies, state agencies and local departments. These separate entities by their very nature are hesitant about efforts that would reduce their autonomy in the name of enhanced coordination and inter-organizational functioning. There are distinct federal-state, state-local, and public-private demarcations. While influenced and persuaded by financial incentives and legal mandates, the spirit of independence and separation that is a national hallmark could impose obstacles to efficient preparedness coordination and emergency management. And while Israeli political officials have assigned disaster management and health decisions to well-trained specialists, in the U.S., non-expert political figures assume a broader role in directing health system policy, public information and operational activities.

Theme. Given those circumstances, the question is: How can this country - for the purpose of advancing the effectiveness and efficiencies of preparedness coordination and incident management - define a focused frame of reference that simultaneously encourages system integration and coordination while acknowledging the independent and distinctive nature of health and related entities? "Connectivity," as a universal principle and operational value, serves this purpose.

Definition. Connectivity is defined here as a seamless web of people, organizations, resources, and information that can best catch, contain, and control a bioterrrorist (or other) incident. Connectivity requires interdependent agencies and organizations to explicitly map and coordinate specific points of linkage during the preparedness phase to ensure that they will smoothly operate during an event and post-event phase. Achieving connectivity in the course of preparedness is the best predictor of its presence and practice during an actual emergency.

Terrorism. The "seamless web" of connectivity alludes to the unique problems of bioterrorism preparedness. A conventional bomb blast or armed attack is readily apparent as it occurs. This is *physical* terrorism. By contrast, a bioterrorist incident and for that matter certain chemical attacks are referred to as *silent* terrorism. A biological agent could be released or transmitted and would be apparent only after victims begin to show physiological symptoms. If those symptoms are mistaken for something other than a biological attack in progress, or if patterns of symptoms are not immediately identified, then the scope and gravity of the attack will be greatly magnified. Examples of this seamless web include capacities for daily reviews of hospital admissions to identify unusual patterns, collection and analysis of information on purchases of over-the-counter drugs, training for clinicians so they can immediately identify symptoms of a biological or chemical attack, and strategically located sensors that detect the presence of dangerous agents in the air, water, or food. The seamless web is not an "ironclad door." It recognizes that an open and free society can only tolerate limited surveillance and detection in the name of bioterrorism prevention. So while intelligence and law enforcement may not be able to reliably intercept or prevent a bioterrorist incident before it occurs, the hope is that this seamless web will dependably limit its impact afterwards.

Assessment. This preparedness web is constructed of "people, organizations, resources, and information." A high level of connectivity is one in which these elements are deliberately and closely linked and integrated. A low level of connectivity is a haphazard collection of individual components that may or may not be able to work together during an emergency. The purpose of preparedness is to be intentional and to be creative, linking key components with unprecedented coordination in order to raise the level of connectivity. The process requires planners to identify the threats and then test whether there is capacity to reliably suppress those

hazards. In other words, through planning, drills, and analysis, it is necessary to catch the holes in the web.

Functions. The key strengths of this suppression process are "catch, contain, and control." "Catch" is about surveillance and detection. It requires the web to create an immediate and accurate picture of the event: what happened? How many people are involved? Where is the incident located? "Contain" is about management. It is about mobilizing the health system to evacuate, diagnose, and treat victims in order to reduce mortality and morbidity. Health resources must be immediately available to envelop the incident. "Control" is about the rest of society: reducing spread of the disease, segmenting elements of the web to allow for other functioning, and then supporting the web so it can effectively accomplish its mission.

Silos. If connectivity is so essential to preparedness, one might ask why it is not already in place. The silo mentality is a major impediment. There is a tendency in organizations and among people working in them to think in narrow and self-protective terms. The silo mentality refers to a perspective that is insular, parochial, isolationist, and tilting toward the close-minded. The prevalence of this silo thinking is understandable. Training and career development occur in silos, knowledge tends to organize itself in silo-oriented literature, budgets, space, and departments are bunched and distinguished into silos for ease and efficiency of management. These silos offer a reinforcing zone of familiarity that encourages silo reinforcing pursuits. Connectivity acknowledges the effects and inevitabilities of silo thinking, and counters it by constructing explicit, robust, and purposeful bridges that serve to link and re-motivate preparedness efforts. In this way, connectivity provides an operational framework to perform and produce beyond the confines of the separate silos that comprise our preparedness system.

Process. Bridge building itself is an essential task of connectivity. It requires leaders to be clear and intentional about how their shared purposes and linked objectives will be achieved. Creating a connected web is by design a step by step process. This process recognizes and values the distinct qualities and contributions of each constituent, discovers what they can achieve and accomplish working together, explores new ways to enhance their connectivity, and

through that learning and problem solving process, better aligns their working relationship and ultimately their connectivity.

Method. Briefly described here is a systematic, four-step technique that can efficiently and effectively facilitate the task of building the system alignment necessary to achieve connectivity. This method (described in greater detail in a separate concept paper) is called the "Walk in the Woods," a model of interest-based negotiation and multi-dimensional problem solving that focuses upon and integrates the shared objectives and concerns of those who are party to the preparedness process. The "Walk" is named for a well-known account of interest-based negotiation during U.S.–Soviet arms reductions talks and derives from extensive experience in conflict resolution for health related issues. It is a negotiation process for bringing together key people for a focused and directed conversation that will air and resolve conflict, shape solutions, and build constructive relationships. The steps of the Walk also reflect themes relevant to the continuous work of assessing and enhancing connectivity. The following brief overview illustrates key points in each step of the Walk as applied to preparedness "connectivity".

Step one – "self interests" – focuses on identifying distinct areas of responsibility by encouraging participants to see preparedness through the lens of their own agency, professional training, or personal experience. In fact, this is the basic starting point and frame of reference that people bring to their work, though it is rarely acknowledged or understood. There is often a reluctance to invest even minimal time to learn the frame of reference of others engaged in related work or efforts. This first step of the Walk need not take a great deal of time, though it often does spark a change in attitude. This is because the most important activity of step one is listening, getting people to intentionally pay attention to one another. People - especially those in leadership positions - are often too busy to listen. The Walk grounds their attention. If people are not paying attention to one another in the planning and preparation phase, they are less likely to do so during an actual emergency. Out of this "self-interests" step, participants have a broader appreciation for the distinct roles, interests, and objectives of other key players, and for how the activities of others impacts upon their own roles and responsibilities.

Step two – "enlarged interests" – looks at the preparedness system as a whole to grasp the bigger picture of dependence, interdependence, independence and ultimately, connectivity. Are people, organizations, resources, and information appropriately linked, or not? What do I expect from you and what do you expect from me? Where are there gaps in the system, and how seamless is our web? Where might there be misunderstandings in roles and relationships, including redundancies that may be a source of conflict? Often, people work in a system without a true understanding for how its parts are or are not connected. The understanding of distinct components derived from step one of the Walk is useful for identifying the linkages expected in step two. In essence, participants take a connectivity inventory of expectations to find which are working well, which are not, and which need greater attention. From this, participants shape a multi-dimensional view of their preparedness system, all with an eye toward improving its connectivity and functioning during an emergency.

Steps one and two are called the learning steps. This is who we are. This is how well we are or are not connected. Steps three and four are the action steps. How can we operate better? What agreements can we fashion to ensure that our objectives and work are maximally aligned?

Step three – "enlightened interests" – is the creative problem solving step of the process. In step two, participants recognize "what we have" in our web. In step three, the question is "how can we make our web better?" And because they are engaged in this deliberate problem solving process, they are encouraged to think and interact optimistically, to ponder how they can fashion their web to even exceed expectations. Participants imagine, explore, and invent new options aimed at enhancing connectivity. At first, they are encouraged to brainstorm, think out of the box, and pursue new ideas without filtering or discouraging innovation and creativity. In the latter stage of this step, these new ideas are categorized by consensus of the participants, into for example "feasible," "maybe feasible," or totally "infeasible." Typically, participants will come up with 40 new ideas that likely otherwise would not have been considered. These ideas include the wild, the crazy, and often the humorous. Perhaps only ten of these new ideas will endure onto the feasible column. However, these are ten new breakthroughs that otherwise would not have been discovered. Beyond that, this exercise of

exploring new options energizes a group of people who are learning how they can better work together, an essential ingredient of connectivity. It is these new ideas that they bring into the fourth step of the process.

Step four – "aligned interests" – is the decision-making and agreement phase of the Walk. To this point, participants systematically assessed their preparedness web and each of their distinct roles and linkages within it, focusing on how they might improve its connectivity to make it as seamless as possible. "You expect information from me. What can we agree to do in order to enhance its timeliness, clarity, and analytic value?" "I expect a decision from you." Again, the focus is agreement on improved timeliness, clarity, and analytic value. The same is true for resources, including medical supplies, personnel, and equipment. Because preparedness for civilian emergencies involving weapons of mass destruction requires coordination of such a wide span of agencies, achieving this clarity and agreement in the preparedness phase is essential for maximizing efficiency and effectiveness of operation during a crisis. Perhaps the most important realization deriving from step four is, "If I succeed, you succeed. And if you succeed, I succeed. Therefore, let's commit to options and operations that advance mutual success." This sort of appreciation is at the heart of the experience of the Walk in the Woods, both for its substantive contributions as well as for the relational gains accomplished for people working together.

Buy-in. The Walk builds capacity for negotiating differences, problem solving, and conflict resolution pertinent to preparedness. It accomplishes this task by explicating, working with and then transforming the *motives* of those working together. Participants enter the process with a natural focus on their *separate motives*. The self-interests phase focuses on *individual motivations* and the big-picture enlarged-interests turns the attention to *overlapping motivations*. The creative enlightened interests step focuses on *new motivations*, and the aligned interests step generates agreement on options for which there is *combined motivation*. In the end, the agreement and plans for moving forward reflect the *shared motives* of those who are party to the process. Because the success of the preparedness plan and its potential implementation depends on the active support from those involved, and because those responsible for its implementation

were party to designing the plan, there is greater likelihood to generate "buy-in" for the outcome because there has been active participation in the process of its creation.

The Walk in practice. A typical "Walk" can be accomplished in as little as a two hour meeting. When a disagreement occurs in the midst of an emergency, it can be accomplished in a matter of moments. Having a conflict resolution process ready at hand is a matter of mindset, training and discipline. When integrated into the preparedness system, it can be used to address the spectrum of issues and obstacles that can be anticipated whenever organizations and people unaccustomed to working together are assigned to perform interdependent tasks. In a formal meeting, step one – *self-interests* – has each participant telling their "story" – scope of responsibility, expertise, functions, etc. - from their unique vantage point. Again, the key point is listening and learning. Six people should be able to accomplish this step in as little as 30 minutes. Step two – *enlarged interests* – has participants assessing the connectivity of their web. This is not a blame game. It is about acknowledging a shared mission and mutual responsibility focused upon discovering both the strengths and weaknesses of the system that is in place. It is an important opportunity to diplomatically address and negotiate differences. Step three – *enlightened interests* – asks what we could do to improve upon the connectivity of our web. The more creative, engaged, and curious the group, the better is the productivity of this step in the process. Finally, step four – *aligned interests* – is about forging agreement and a mutual commitment on new plans and actions designed to enhance connectivity. The new understandings and commitments could be memorialized in a handshake, memorandum of understanding, or a formal contract. A typical Walk can be accomplished independently by individuals who have had rudimentary training. For more complex issues and scenarios, the Walk is led by a trained and experienced facilitator.

Leadership. An inventory was taken on what are some of the skills and requirements necessary to be a leader for public health preparedness. To accomplish the task, one must be: a scientist to understand evidence; a clinician to map treatment; a strategist to assess options; an ethicist to grasp human dimensions; a planner to chart what must be done; an organizer to link people and resources; a risk assessor to appraise choices and their consequences; a politician to grasp decision-making dynamics; a financial officer to manage money and spending; and finally,

in the ideal, a prophet, to be able to see into the future and then plan accordingly. Unfortunately, even with creative cloning, it is unlikely that we will be able to combine all these talents and capabilities into one person. Hence, the need for many of us to work closely together, combining both our skills and knowledge, and hopefully out of the process, gleaning some wisdom to help us chart the difficult short term decisions so that in the long run, we will build a preparedness system that is matched to its task.

Responsibility. How does connectivity translate into the mission of the national preparedness effort? It is a matter of profound personal, organizational and leadership responsibility. To successfully protect and care for the health and well-being of the civilian population during a national emergency, no one can be an island and no organization can function as a silo. It is up to each individual involved in the preparedness process to assess and enhance their own connectivity. In the most pragmatic of terms, it is a matter of knowing beforehand whom to call, what functions you will be expected to fulfill, and what you will do if the preparedness system itself has been compromised. It is the mandate of each organization to address and to overcome internal and external conflicts as a key responsibility in their preparedness process, to be clear and intentional about expectations and capacities to fulfill them, and to design back-up systems and contingencies to ensure smooth and continued functioning during a disaster. Building a model for connectivity and elevating its importance is the duty of leadership. It is a matter of learning, doing, and accomplishing. Beyond the silo mentality, leaders must motivate integrative thinking, demonstrating how each individual component of the preparedness system does better by thinking and acting in cross departmental terms.

Readiness. The newly legislated Homeland Security Department offers a distant hope that our many agencies and organizations will reform into a single bureaucracy built upon a foundation of connectivity. However, at present, the nation has a formidable short-run task of preparedness to accomplish. Creating a "seamless web" is at the heart of the immediate leadership mission as the country now transitions from a period of preparedness to a state of heightened readiness.